

Quarterly Progress Report

Project Title:	Survey of Driver Perceptions of Railroad and Light Rail Warning Devices/Grade Crossings - Year 2		
RFP Number: 2001-33	NJDOT Research Project Manager: Karl Brodtman		
Task Order Number/Study Number: NCTIP-33	Principal Investigator: Jeng, One-Jang		
Period Starting: 1/1/2002 - 12/31/2003 (Start-End Date of Study)	Period Ending: 12/18/2003		

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Phase I-Literature Search: Conduct a literature search of the current state of the practice	10	0	100	10
Phase II-Research Approach: Task 1: Determine the various types of railroad and light rail highway grade crossings in New Jersey	5	0	100	5
Task 2: Conduct a survey of other states for information	10	0	100	10
Task 3a: Catalog the individual active and passive railroad/light rail crossing devices in New Jersey	5	0	100	5
Task 3b: Arrange the devices in groups that would be found at typical crossings as found in the classification system in Task 1	5	0	100	5
Task 4: Setup of laboratory experimental tasks, video and still image editing, programming for recording subject responses and data processing	15	0	100	15
Conduct a pilot study for the experiments; finalize experiment procedures	10	0	100	10
Conduct formal laboratory experiments	10	10	85	8.5
Perform data processing and statistical analysis for the laboratory experiments	10	20	70	7
Task 5: Technical Memorandum on the driver manual chapters, exam questions and answers	10	10	60	6
Task 6: Prepare and deliver the final report	10	30	30	3
Final Report				
TOTAL	100 %			84.5 %

1. Progress this quarter by task:

During the reported quarter, the research team conducted a laboratory experiment to test 40 subjects about their perception toward traffic control devices (advanced warning signs, traffic lights, traffic signs, and pavement marking) at railroad crossing areas. Subjects were recruited from NJIT campus and off campus. Subjects included 30 subjects possessing the regular driver's license and 10 with commercial driver's license (five truck drivers and five school bus drivers). Results of the laboratory experiment showed that subjects had diverse perceptions about meanings and responses to

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different traffic control devices at railroad crossings. The laboratory experiment results suggest that there is a need to include some information regarding driving at railroad crossings in all driver's manuals. The experiment results were sent to Dr. Srinivasan, consultant of the project, to revise the draft railroad section that he has been working on.

In addition to the progress in the laboratory experiment, the research team also obtained over 200 driving test questions from various sources. It was found that only less than 5 questions out of over 200 questions related to railroad crossings. The research team compiled the questions and worked on making driving test questions which deal with railroad crossing scenarios. A second laboratory test will be conducted in January to test the effectiveness of a railroad section for the New Jersey driver's manuals.

2. Proposed activities for next quarter by task:

The next quarter will be the last quarter for the project. There will be a performance evaluation on driver's perception and understanding of warning signs and responses at railroad crossing comparing subjects who read the proposed railroad crossing section for the New Jersey driver's manual and those who read the current New Jersey driver's manual. A draft project report will be submitted to NJDOT for comments in January.

3. List of deliverables provided in this quarter by task (product date):

4. Progress on implementation and training activities:

5. Problems/proposed solutions:

6. Budget summary:

Total Project Budget (# Years)	2 Year	\$207,454.00
Total Project Expenditure to date		\$140,424.00
% of Total Project Budget Expended		67.69%
Task Order Number/ Study Number	2 Year	NCTIP-33
Current Task Order Budget (# of Years)		\$80,790.00
Actual Expenditure to Date Against Current Task Order		\$58,542.00
% of Current Task Order Budget Expended		72.46%